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(54) **METHOD AND SYSTEM FOR ACQUIRING CONTINUOUS PACKET CONNECTIVITY
TECHNOLOGY SUPPORT CAPABILITY INFORMATION**

(57) A method and system for acquiring continuous packet connectivity technology support capability information. The method comprises the following steps: Step 102, sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller, by means of a serving radio network controller; Step 104, adding a continuous packet connectivity technology support capability information of an adjacent cell into a radio link establishing response message or a radio link adding response message after the radio link establishing request message or the radio link adding request message is received, and returning the radio link establishing response message or the radio link adding response message to the serving radio network controller, by means of the drift radio network controller; Step 106, acquiring the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message, after the radio link establishing response message or the radio link adding response message is received, by means of the serving radio network controller.

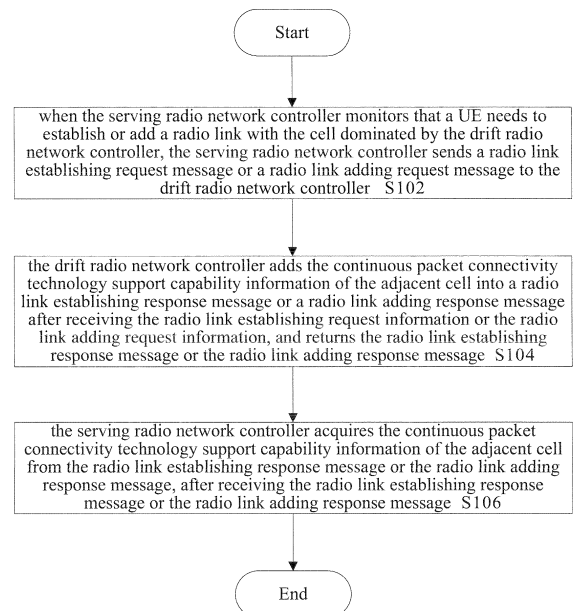


Fig. 1

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Description

Field of the Invention

[0001] The present invention relates to high speed packet access technology of wireless communication system, in particular to a method and system for acquiring continuous packet connectivity technology support capability information.

Background of the Invention

[0002] In the high speed packet access system, the user equipment (UE) is allowed to stay in dedication state for a relative long time, in order to avoid to be shifted to cell common state as no data is sent in a relative short time, and UE power resource and system load can be saved while the UE is in dedicated state. 3GPP R7 protocol introduces continuous packet connectivity technology, in which, when there is no uplink data of UE or control information on HS-DPCCH (Dedicated Physical Control Channel (uplink) for high speed downlink sharing channel), the transmitter will be powered off; when there is uplink data of UE or control information on HS-DPCCH, the transmitter will be powered on, thus the UE power resource and system load can be saved; at the same time, the base station (BS) will power off the transmission of F-DPCH (Fractional Dedicated Physical Channel) during the interval in which the receiver is power off to avoid resource wasting. Namely, continuous packet connectivity technology can be implemented only under the supports of both the BS and the UE.

[0003] Whether the UE can employ continuous packet connectivity technology shall be controlled by radio network controller (RNC), according to 3GPP protocol, the UE which support high speed packet technology is forced to support continuous packet connectivity technology, while no requirement is applied to the BS. Therefore, it is necessary for the RNC to determine whether employing continuous packet connectivity technology based on the support capability of the BS, so as to configure related parameters required by continuous packet connectivity technology. In prior art, according to the standard protocol, the serving RNC can not acquire the information on whether the BS of the drift RNC supports continuous packet connectivity technology or not, thus continuous packet connectivity technology can not be correctly implemented.

[0004] Therefore there is a need for a solution for the serving RNC to acquire the continuous packet connectivity technology support capability information (CPC Capability) of drift RNC BS.

Summery of the Invention

[0005] Based on above one or several problems, the present invention aims to provide a improved technical solution for acquiring continuous packet connectivity

technology support capability information, which is used to make the serving RNC acquire continuous packet connectivity technology support capability information of the drift RNC BS, so as to guarantee continuous packet connectivity technology can be implemented correctly, thus ensure service quality for users and save system resource.

[0006] In order to realize the above object, according to one aspect of the present invention, provides a method for acquiring continuous packet connectivity technology support capability information, comprising:

Step 102, sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller, by means of a serving radio network controller;

Step 104, adding a continuous packet connectivity technology support capability information of an adjacent cell into a radio link establishing response message or a radio link adding response message after the radio link establishing request message or the radio link adding request message is received, and returning the radio link establishing response message or the radio link adding response message to the serving radio network controller, by means of the drift radio network controller;

Step 106, acquiring the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message, after the radio link establishing response message or the radio link adding response message is received, by means of the serving radio network controller.

when it is monitored that the UE needs to establish the radio link with the cell dominated by the drift radio network controller, sending the radio link establishing request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message by means of the drift radio network controller; when it is monitored that the UE needs to add the radio link with the cell dominated by the drift radio network controller, sending the radio link adding request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message by means of the drift radio network controller.

[0007] The continuous packet connectivity technology support capability information of the adjacent cell may

indicates whether continuous packet connectivity technology is supported by certain bits.

[0008] The continuous packet connectivity technology support capability information of the adjacent cell acquired by the serving radio network controller in the Step 106. is used to determine whether the UE continue to employ, stop employing, or begin to employ continuous packet connectivity technology after the radio link is established or added. If continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the adjacent cell needs to be added into an active set, then determining that the UE continue to employ continuous packet connectivity technology by means of the serving radio network controller; if continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is not supported, and the adjacent cell needs to be added into the active set, then determining that the UE stop employing continuous packet connectivity technology by means of the serving radio network controller; if continuous packet connectivity technology has not been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the UE needs to hard handoff to the adjacent cell, then determining that the UE begin to employ continuous packet connectivity technology by means of the serving radio network controller.

[0009] In order to realize the above object, according to another aspect of the present invention, provides a system for acquiring continuous packet connectivity technology support capability information. The system includes: a serving radio network controller, for sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller, and acquiring continuous packet connectivity technology support capability information of an adjacent cell from a radio link establishing response message or a radio link adding response message returned by the drift wireless network controller after the message is received; and the drift radio network controller, for adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message or the radio link adding response message after the radio link establishing message or the radio link adding request message is received, and retuning the radio link establishing response message or the radio link adding response message to the serving radio network controller.

[0010] The serving radio network controller is used to send the radio link establishing request message to the

drift radio network controller when it is monitored that the UE needs to establish the radio link with the cell dominated by drift radio network controller, and the drift radio network controller is used to add the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message; the serving radio network controller is used to send the radio link adding request message to the drift radio network controller when it is monitored that the UE needs to add the radio link with the cell dominated by the drift radio network controller, and the drift radio network controller is used to add the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message.

[0011] The continuous packet connectivity technology support capability information of the adjacent cell may indicate whether continuous packet connectivity technology is supported by certain bits.

[0012] The serving radio network controller is used to determine that the UE continue to employ continuous packet connectivity technology, in the case of continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the adjacent cell needs to be added into an active set; the serving radio network controller is used to determine that the UE stop employing continuous packet connectivity technology, in the case of continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is not supported, and the adjacent cell needs to be added into the active set; the serving radio network controller is used to determine that the UE begin to employ continuous packet connectivity technology, in the case of continuous packet connectivity technology has not been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the UE needs to hard handoff to the adjacent cell.

[0013] With at least of the above technical solution, the present invention allows that the serving RNC to acquire whether the cell dominated by the drift network controller supports continuous packet connectivity technology or not, so as to ensure that continuous packet connectivity technology can be correctly used, thus the serving quality can be guaranteed and the system resource can be saved.

Description of the Drawings

[0014] The drawings illustrated here provide a further understanding to the present invention and form a part of the application, and the exemplary embodiments of the present invention and the description thereof are

used to explain the present invention, rather than limit the present invention improperly, in which:

Fig.1 is a flow chart of the method for acquiring continuous packet connectivity technology support capability (CPC Capability) information according to the embodiment of the present invention;

Fig.2 is a block diagram of the system for acquiring continuous packet connectivity technology support capability information according to the embodiment of the present invention;

Fig.3a is a flow chart of acquiring information according to the embodiment of the present invention;

Fig.3b is another flow chart of acquiring information according to the embodiment of the present invention; and

Fig.4 is a flow chart of acquiring and applying information according to the embodiment of the present invention.

Detained Description of the Invention

[0015] The embodiments of the present invention will be described hereinafter in detail with reference to the accompany drawings. If not conflict, the embodiments and the technical features of the embodiments can be combined with each other.

[0016] The method of the embodiment of the present invention is implemented based on the prior art 3GPP protocol standard, by adding the continuous packet connectivity technology support capability information of the BS into a radio link establishing response message or a radio link adding response message returned by the drift RNC. Concretely, the method can be implemented with but no limited to the following two ways: (1) the drift RNC carries the continuous packet connectivity technology support capability information of the adjacent cell on the radio link establishing response message; (2) the drift RNC carries the continuous packet connectivity technology support capability information of the adjacent cell on the radio link adding response message.

Embodiment 1

[0017] Referring to Fig.1 the method for acquiring continuous packet connectivity technology support capability information according to the embodiment of the present invention comprises the following steps:

Step 102, sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller,

by means of a serving radio network controller;

Step 104, adding a continuous packet connectivity technology support capability information of an adjacent cell into a radio link establishing response message or a radio link adding response message after the radio link establishing request message or the radio link adding request message is received, and returning the radio link establishing response message or the radio link adding response message to the serving radio network controller, by means of the drift radio network controller;

Step 106, acquiring the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message, after the radio link establishing response message or the radio link adding response message is received, by means of the serving radio network controller.

Case 1

[0018] when it is monitored that the UE needs to establish the radio link with the cell dominated by the drift radio network controller, sending the radio link establishing request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message by means of the drift radio network controller.

[0019] The examples of the embodiments of the present invention are shown by the flow chart of Fig.3a:

Step 302a, the serving RNC monitors that the UE needs to establish a radio link with the cell dominated by the drift RNC.

Step 304a, the serving RNC sends a radio link establishing request message to the drift RNC.

Step 306a, the drift RNC writes the continuous packet connectivity technology support capability information of the adjacent cell to the radio link establishing response message.

Step 308a, the drift RNC returns the radio link establishing response message to the serving RNC.

Step 310a, the serving RNC acquires and stores the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message.

Case 2

[0020] when it is monitored that the UE needs to add the radio link with the cell dominated by the drift radio network controller, sending the radio link adding request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message by means of the drift radio network controller.

[0021] The examples of the embodiments of the present invention are shown by the flow chart of Fig.3b:

Step 302b, the serving RNC monitors that the UE needs to add a radio link with the cell dominated by the drift RNC.

Step 304b, the serving RNC sends a radio link adding request message to the drift RNC.

Step 306b, the drift RNC writes the continuous packet connectivity technology support capability information of the adjacent cell to the radio link adding response message.

Step 308b, the drift RNC returns the radio link adding response message to the serving RNC.

Step 310b, the serving RNC acquires and stores the continuous packet connectivity technology support capability information of the adjacent cell from the radio link adding response message.

[0022] Preferably, the continuous packet connectivity technology support capability information of the adjacent cell indicates whether continuous packet connectivity technology is supported or not by certain bits. For example, "0" denotes not being supported, "1" denotes being supported; the continuous packet connectivity technology support capability information of the adjacent cell can also be indicated by other ways.

[0023] The continuous packet connectivity technology support capability information of the adjacent cell acquired by the serving radio network controller in the Step 106, is used to determine whether the UE continue to employ, stop employing, or begin to employ continuous packet connectivity technology after the radio link is established or added, which will be described in detail in the following three cases.

Case 1

[0024] If continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the adjacent cell

needs to be added into an active set, then determining that the UE continue to employ continuous packet connectivity technology by means of the serving radio network controller.

Case 2

[0025] If continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is not supported, and the adjacent cell needs to be added into the active set, then determining that the UE stop employing continuous packet connectivity technology by means of the serving radio network controller.

Case 3

[0026] If continuous packet connectivity technology has not been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the UE needs to hard handoff to the adjacent cell, then determining that the UE begin to employ continuous packet connectivity technology by means of the serving radio network controller.

Embodiment 2

[0027] Referring to Fig.2, the system for acquiring continuous packet connectivity technology support capability according to the embodiment of the present invention comprises a serving RNC 202 and a drift RNC 206. Preferably, the system can be used to implement the method described above.

[0028] Wherein, the serving RNC 202 is used to send a radio link establishing request message or a radio link adding request message to drift RNC 206 after monitoring that UE 204 needs to establish or add a radio link with a cell dominated by drift RNC 206, and acquires continuous packet connectivity technology support capability information of the adjacent cell from a radio link establishing response message or radio link adding response message after receiving the two messages returned by drift RNC 206; and drift RNC 206, which adds the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message or radio link adding response message after receiving the radio link establishing request message or the radio link adding request message, and returns the radio link establishing response message or radio link adding response message to serving RNC 202.

[0029] When serving RNC 202 monitors that UE 204 needs to establish the radio link with the cell dominated by drift RNC 206, it sends the radio link establishing re-

quest message to drift RNC 206 which adds the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message; when serving RNC 202 monitors that UE 204 needs to add the radio link with the cell dominated by drift RNC 206, it sends the radio link adding request message to drift RNC 206 which adds the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message.

[0030] The continuous packet connectivity technology support capability information of the adjacent cell can indicate whether continuous packet connectivity technology is supported by certain bits.

[0031] The serving RNC 202 is used to determine whether UE 204 continues to employ, stops employing, or begins to employ continuous packet connectivity technology through the acquired continuous packet connectivity technology support capability information of the adjacent cell after establishing or adding the radio link. When UE 204 has employed continuous packet connectivity technology, the continuous packet connectivity technology support capability information of the adjacent cell indicates continuous packet connectivity technology being supported, and the adjacent cell needs to be added into the active set, serving RNC 202 determines that UE 204 continues to employ continuous packet connectivity technology; When UE 204 has employed continuous packet connectivity technology, the continuous packet connectivity technology support capability information of the adjacent cell indicates continuous packet connectivity technology not being supported, and the adjacent cell needs to be added into the active set, serving RNC 202 determines that the UE 204 stops employing continuous packet connectivity technology; When UE 204 has not employed continuous packet connectivity technology, the continuous packet connectivity technology support capability information of the adjacent cell indicates continuous packet connectivity technology being supported, and UE 204 needs to hard handoff to the adjacent cell, serving RNC 202 determines that UE 204 begins to employ continuous packet connectivity technology.

[0032] The embodiment of the present invention also relates to a method for drift RNC of high speed packet access system of mobile communication system reporting cell capability.

[0033] The scheme of the embodiment of the present invention comprises the following steps:

Step1: the serving RNC monitors that the UE needs to establish or add a radio link with the cell dominated by the drift RNC.

Step2: the serving RNC sends a radio link establishing request message or a radio link adding request message to the drift RNC.

Step3: the drift RNC writes the continuous packet

connectivity technology support capability information of the adjacent cell to the radio link establishing response or the radio link adding response message.

Step4: the drift RNC returns the radio link establishing response message or the radio link adding response message to the serving RNC.

[0034] Step5: the serving RNC acquires and stores the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response or the radio link adding response message, which is a basis for the serving network controller determining the UE to continue to employ, stop employing or begin to employ continuous packet connectivity technology after the user adding a radio link.

[0035] From the above description, it can be seen that the method for the serving RNC acquiring the continuous packet connectivity technology support capability information of the drift RNC BS, is implemented by carrying the continuous packet connectivity technology support capability information of the adjacent cell in the radio link establishing response message or the radio link adding response message by the drift RNC.

[0036] Wherein, in Step5, the serving RNC acquiring continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message as the basis for the serving network controller determining the UE to continue to employ, stop employing or begin to employ continuous packet connectivity technology after the user adding a radio link, which means that the UE has employed the continuous packet connectivity technology, however, if the RNC find that the cell with new added link supports continuous packet connectivity technology based on the above response message, the UE can continue to employ continuous packet connectivity technology; or else the UE will stop employing continuous packet connectivity technology.

[0037] A further detailed description of the embodiment of the present invention will be given in connection with the drawings. Another embodiment of the present invention provides a method for the serving RNC configuring continuous packet connectivity technology for the UE and the BS according to the continuous packet connectivity technology support capability information reported by the drift RNC, as shown in Fig.4:

Step 402, the serving RNC monitors that the UE needs to establish or add a radio link with the cell dominated by the drift RNC.

Step 404, the serving RNC sends a radio link establishing request message or a radio link adding request message to the drift RNC.

Step 406, the drift RNC writes the continuous packet connectivity technology support capability informa-

tion of the adjacent cell to a radio link establishing response message or a radio link adding response message.

Step 408, the drift RNC returns the radio link establishing response message or the radio link adding response message to the serving RNC.

Step 410, the serving RNC acquires and stores the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message.

Step 412, the serving RNC monitors that it is necessary to add a radio link of a cell dominated by the drift RNC and having the continuous packet connectivity technology support capability information in the saved message for the UE.

Step 414, the serving RNC judges whether the cell with a new established radio link supports continuous packet connectivity technology, if does, the Step 418 will be performed, or else the Step 416 will be performed.

Step 416, the serving RNC re-configures the established radio link for the UE and stops employing continuous packet connectivity technology.

Step 418, the serving RNC establishes the radio link between the UE and the cell dominated by the drift RNC.

[0038] The preferred embodiment of the present invention is described for the purpose of illustration, not for limiting the present invention. For those skilled in the art, it is obvious that various alterations and modifications can be made to the present invention. Any alterations, substitutions and modifications falling into the spirit and principle of the present invention will fall within the scope of the present invention.

Claims

1. A method for acquiring continuous packet connectivity technology support capability information, wherein, comprises:

Step 102, sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller, by means of a serving radio network controller;
Step 104, adding a continuous packet connec-

tivity technology support capability information of an adjacent cell into a radio link establishing response message or a radio link adding response message after the radio link establishing request message or the radio link adding request message is received, and returning the radio link establishing response message or the radio link adding response message to the serving radio network controller, by means of the drift radio network controller;

Step 106, acquiring the continuous packet connectivity technology support capability information of the adjacent cell from the radio link establishing response message or the radio link adding response message, after the radio link establishing response message or the radio link adding response message is received, by means of the serving radio network controller.

2. The method according to Claim 1, wherein, when it is monitored that the UE needs to establish the radio link with the cell dominated by the drift radio network controller, sending the radio link establishing request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message by means of the drift radio network controller;
- when it is monitored that the UE needs to add the radio link with the cell dominated by the drift radio network controller, sending the radio link adding request message to the drift radio network controller by means of the serving radio network controller, and adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message by means of the drift radio network controller.
3. The method according to Claim 1, wherein, the continuous packet connectivity technology support capability information of the adjacent cell indicates whether continuous packet connectivity technology is supported by certain bits.
4. The method according to any one of Claims 1 to 3, wherein, the continuous packet connectivity technology support capability information of the adjacent cell acquired by the serving radio network controller in the Step 106, is used to determine whether the UE continue to employ, stop employing, or begin to employ continuous packet connectivity technology after the radio link is established or added.
5. The method according to Claim 4, wherein, if continuous packet connectivity technology has

been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the adjacent cell needs to be added into an active set, then determining that the UE continue to employ continuous packet connectivity technology by means of the serving radio network controller;

if continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is not supported, and the adjacent cell needs to be added into the active set, then determining that the UE stop employing continuous packet connectivity technology by means of the serving radio network controller;

if continuous packet connectivity technology has not been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the UE needs to hard handoff to the adjacent cell, then determining that the UE begin to employ continuous packet connectivity technology by means of the serving radio network controller.

6. A system for acquiring continuous packet connectivity technology support capability information, wherein, comprises:

a serving radio network controlled, for sending a radio link establishing request message or a radio link adding request message to a drift radio network controller when it is monitored that a UE needs to establish or add a radio link with a cell dominated by the drift radio network controller, and acquiring continuous packet connectivity technology support capability information of an adjacent cell from a radio link establishing response message or a radio link adding response message returned by the drift wireless network controller after the message is received; and

the drift radio network controller, for adding the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message or the radio link adding response message after the radio link establishing message or the radio link adding request message is received, and returning the radio link establishing response message or the radio link adding response message to the serving radio network controller.

7. The system according to Claim 6, wherein, the serving radio network controller is used to send

the radio link establishing request message to the drift radio network controller when it is monitored that the UE needs to establish the radio link with the cell dominated by drift radio network controller, and the drift radio network controller is used to add the continuous packet connectivity technology support capability information of the adjacent cell into the radio link establishing response message;

the serving radio network controller is used to send the radio link adding request message to the drift radio network controller when it is monitored that the UE needs to add the radio link with the cell dominated by the drift radio network controller, and the drift radio network controller is used to add the continuous packet connectivity technology support capability information of the adjacent cell into the radio link adding response message.

8. The system according to Claim 6, wherein, the continuous packet connectivity technology support capability information of the adjacent cell indicates whether continuous packet connectivity technology is supported by certain bits.

9. The system according to any one of Claims 6 to 8, wherein, the serving radio network controller is used to determine whether the UE continues to employ, stop employing, or begin to employ continuous packet connectivity technology after the radio link is established or added, according to the continuous packet connectivity technology support capability information of the adjacent cell been acquired.

10. The system according to Claim 9, wherein, the serving radio network controller is used to determine that the UE continue to employ continuous packet connectivity technology, in the case of continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the adjacent cell needs to be added into an active set; the serving radio network controller is used to determine that the UE stop employing continuous packet connectivity technology, in the case of continuous packet connectivity technology has been employed by the UE, the continuous packet connectivity technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is not supported, and the adjacent cell needs to be added into the active set; the serving radio network controller is used to determine that the UE begin to employ continuous packet connectivity technology, in the case of continuous packet connectivity technology has not been employed by the UE, the continuous packet connectivity

technology support capability information of the adjacent cell indicates that continuous packet connectivity technology is supported, and the UE needs to hard handoff to the adjacent cell.

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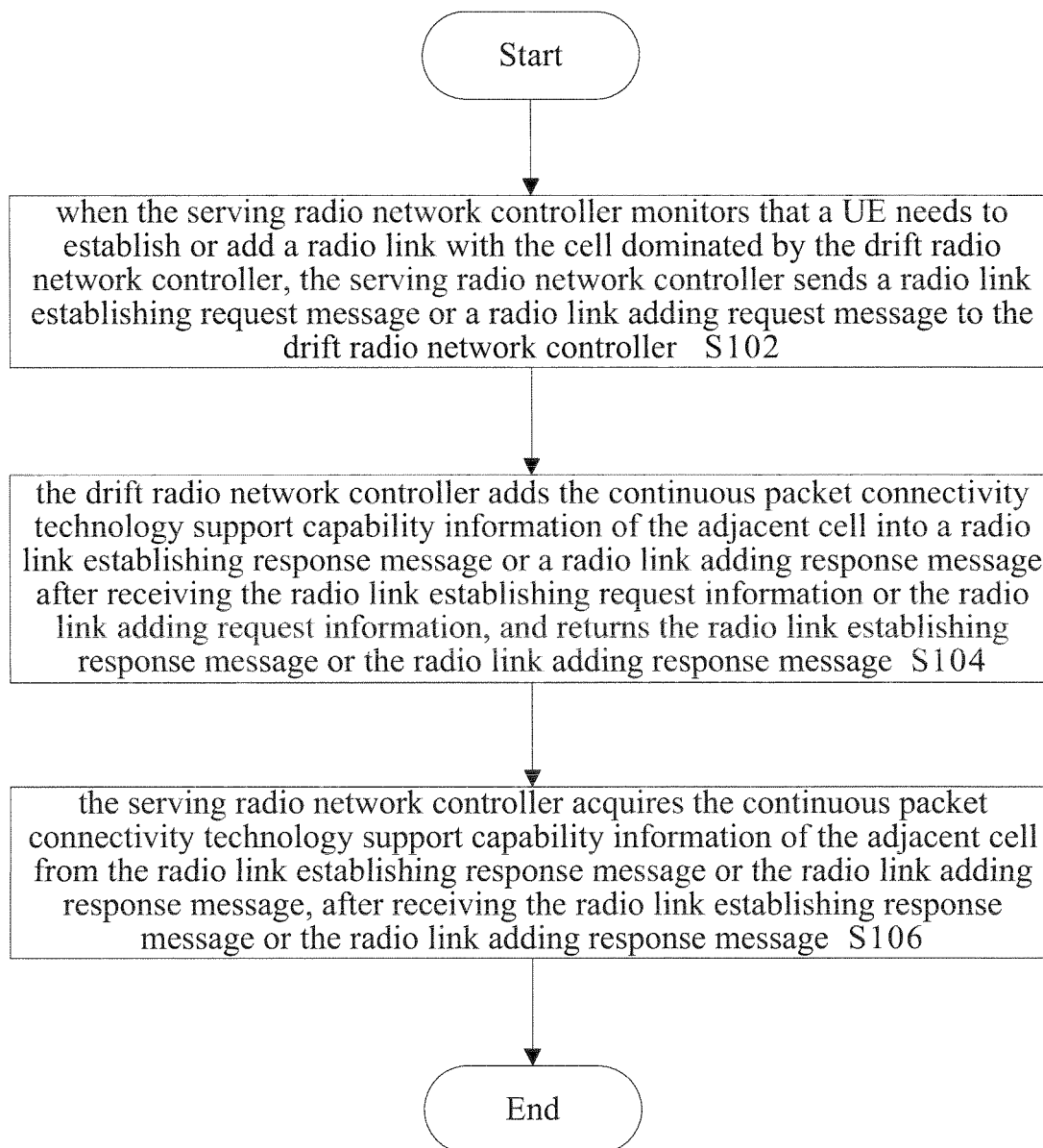
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**Fig. 1**

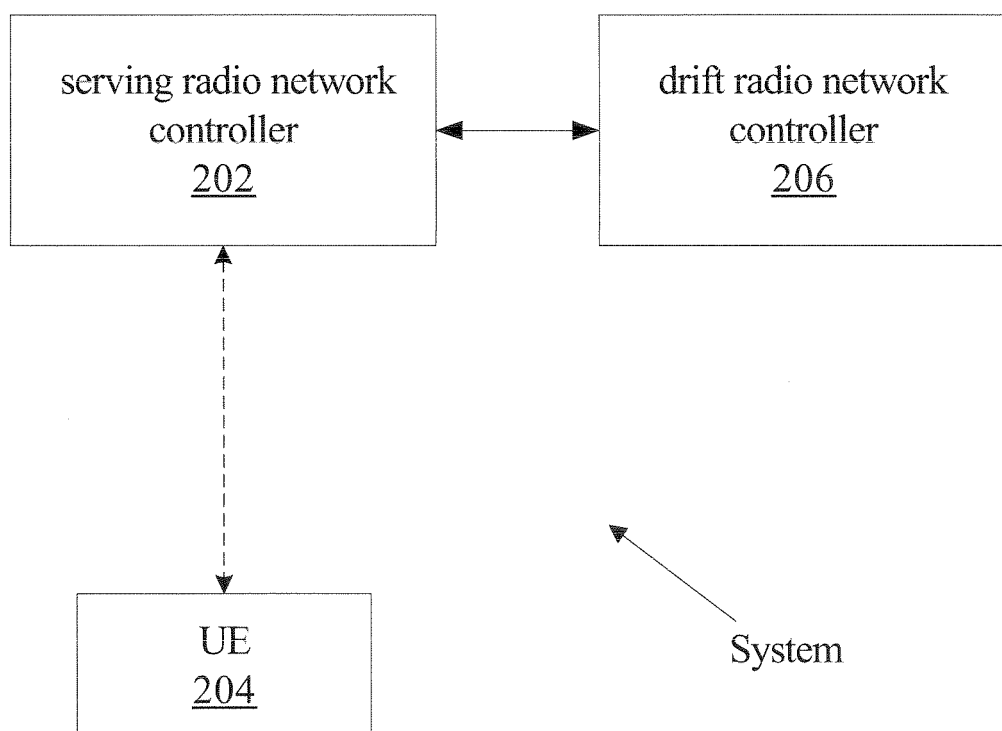
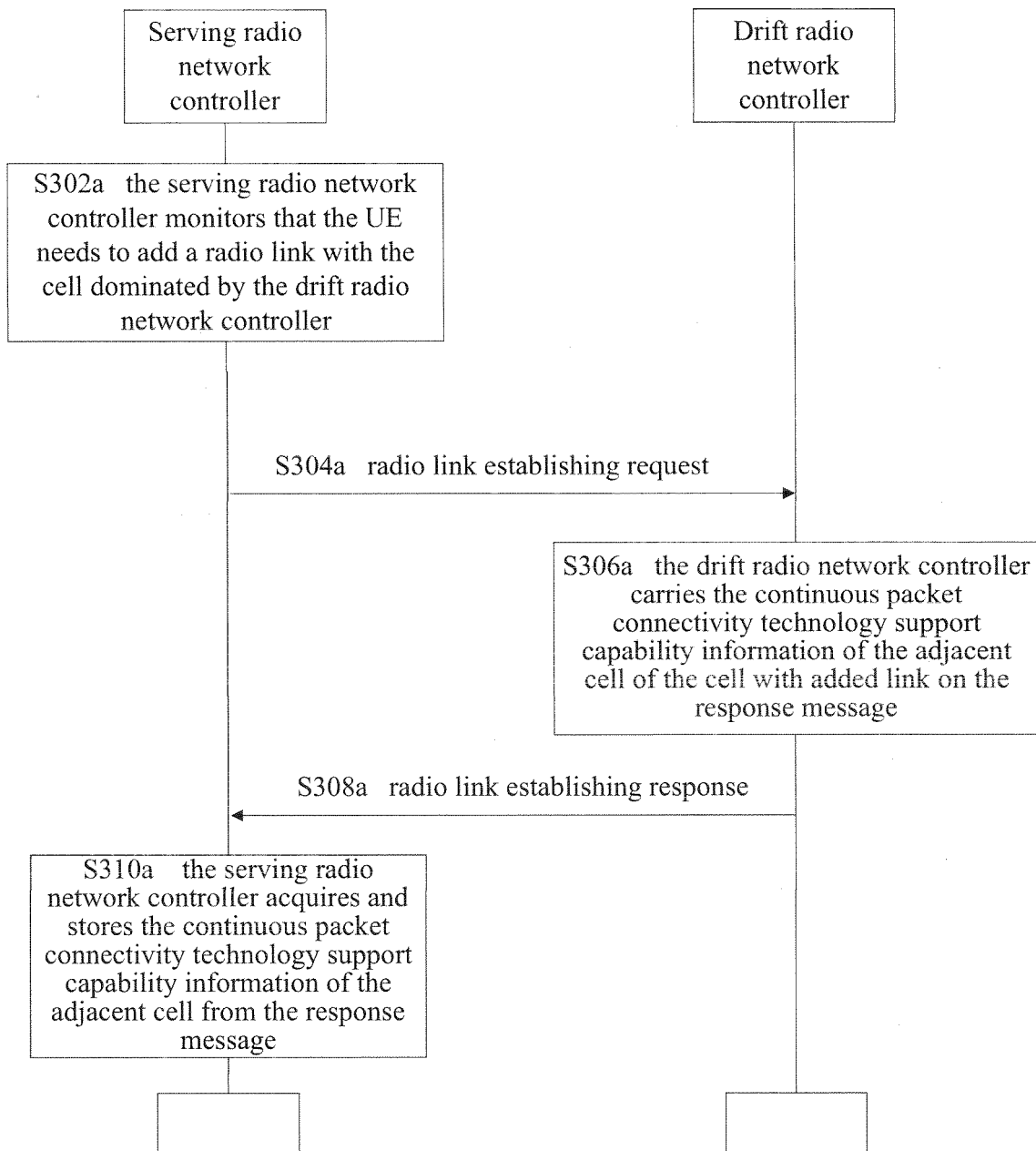
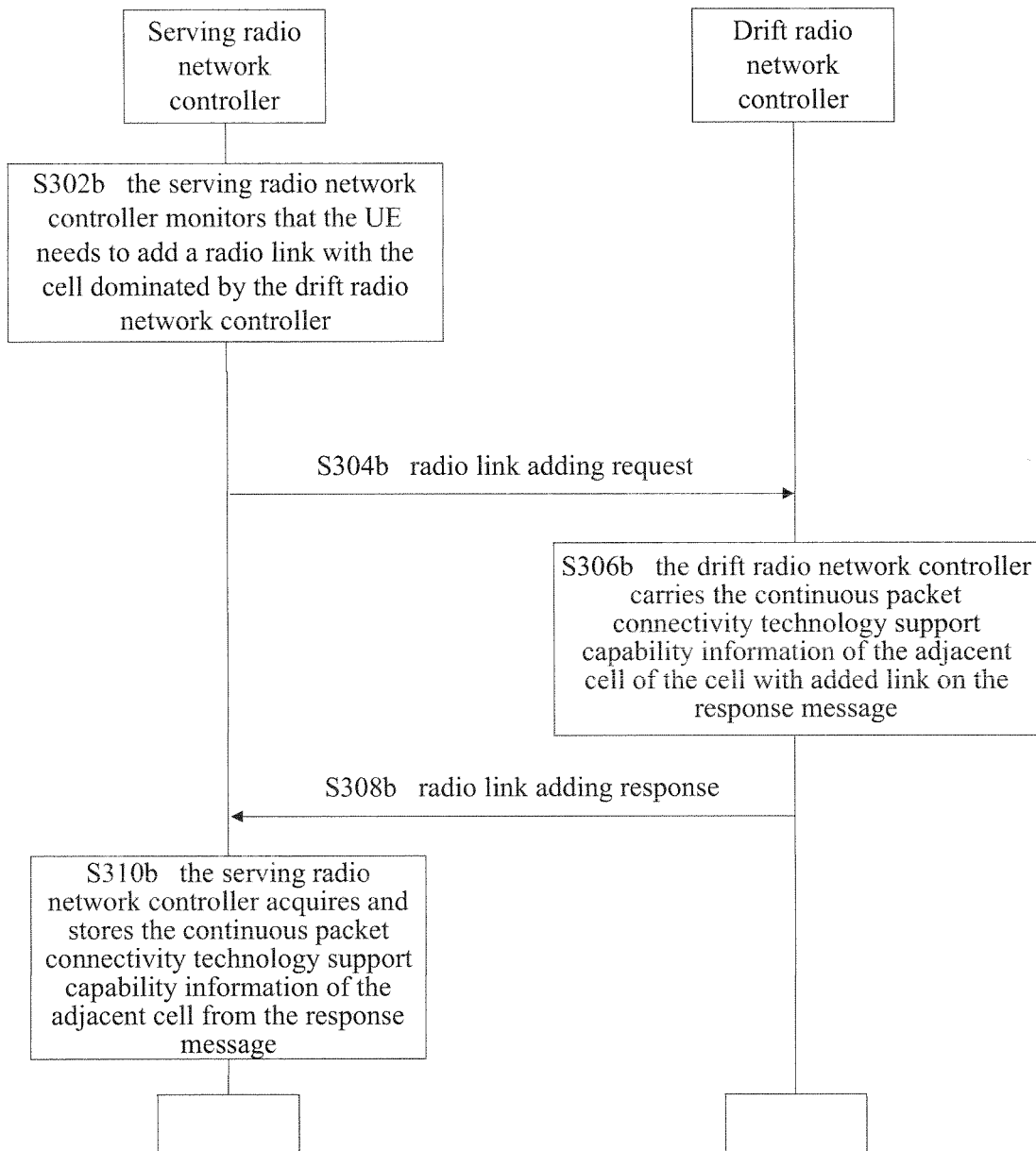


Fig. 2

**Fig. 3a**

**Fig. 3b**

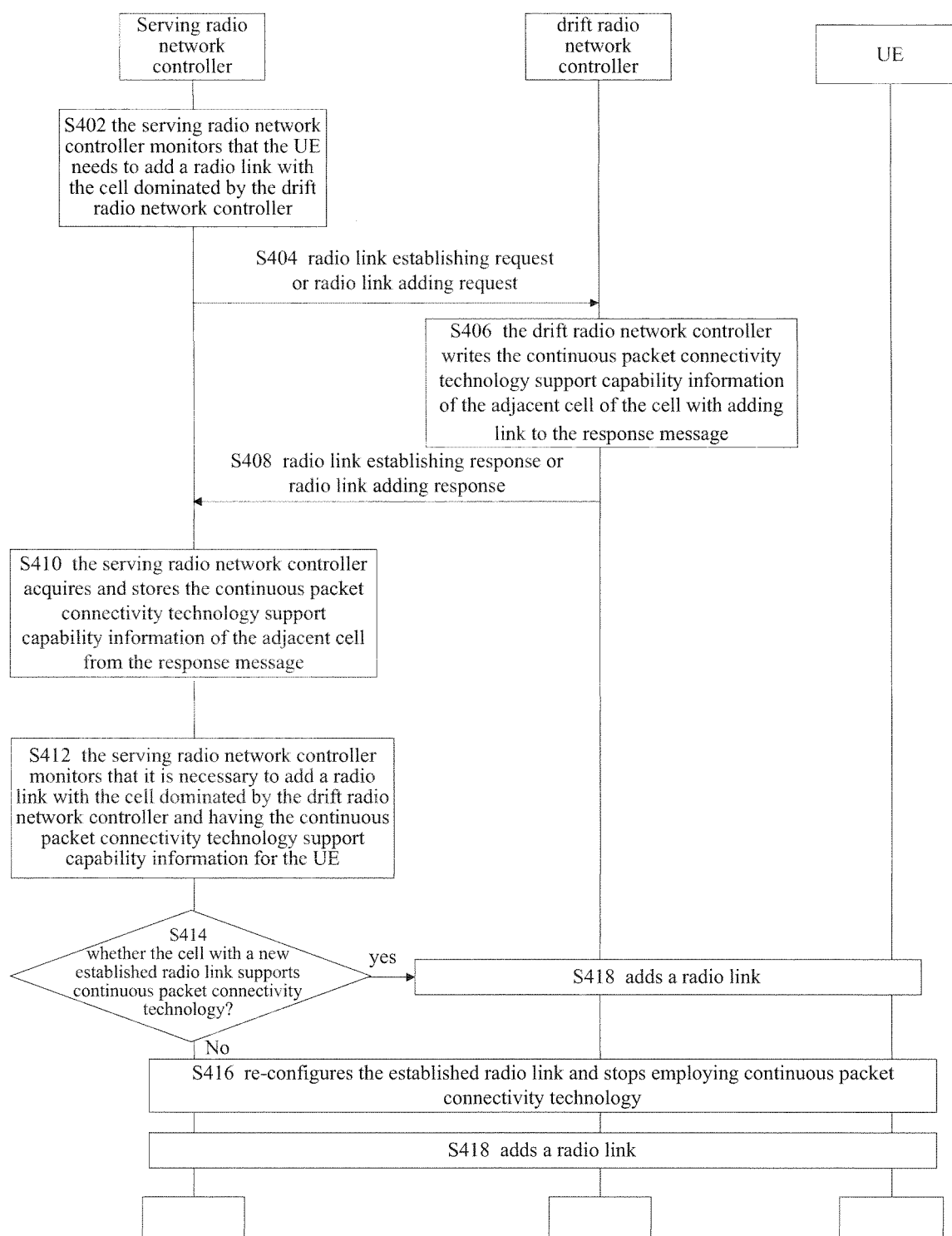


Fig. 4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2007/002556

A. CLASSIFICATION OF SUBJECT MATTER														
See the extra sheet														
According to International Patent Classification (IPC) or to both national classification and IPC														
B. FIELDS SEARCHED														
Minimum documentation searched (classification system followed by classification symbols)														
IPC: H04Q7/, H04B7/, H04L12/														
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched														
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)														
WPI; PAJ; EPODOC; CPRS; CNKI: network controller, wireless network, radio network, wireless link+, wireless connect+, packet, continuous packet, packet connectivity, packet connected, drift, service+, base station														
C. DOCUMENTS CONSIDERED TO BE RELEVANT														
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
A	CN1496159A, (SAMSUNG ELECTRONICS LO LTD), 12 May 2004(12.05.2004), see the whole document	1-10												
A	EP1351424A2, (LG ELECTRONICS INC), 08 Oct. 2003(08.10.2003), see the whole document	1-10												
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.														
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Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451		Authorized officer CHEN, Xiaohua Telephone No. (86-10)62085509												

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INTERNATIONAL SEARCH REPORT
 Information on patent family members

International application No.

PCT/CN2007/002556

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN1496159A	2004-05-12	KR20040016540A	2004-02-25
		US2004085926A1	2004-05-06
		EP1392075A1	2004-02-25
		AU2003235064B2	2005-04-14
		RU2003125334A	2005-02-20
		AU2003235064A1	2004-03-04
		JP2004135292A	2004-04-30
		JP3836457B2	2006-10-25
		RU2263400C	2005-10-27
		HK1075349A1	2007-08-10
EP1351424A2	2003-10-08	KR20030079632A	2003-10-10
		RU2291591C2	2007-01-10
		WO03088695A1	2003-10-23
		JP2005521360T	2005-07-14
		CN1647562A	2005-07-27
		AU2003222461A1	2003-10-27
		US2004009767A1	2004-01-15
		INKOLNP200401381E	2006-05-05
		RU2004132828A	2005-04-20
		CN1299523C	2007-02-07

Form PCT/ISA/210 (patent family annex) (April 2007)